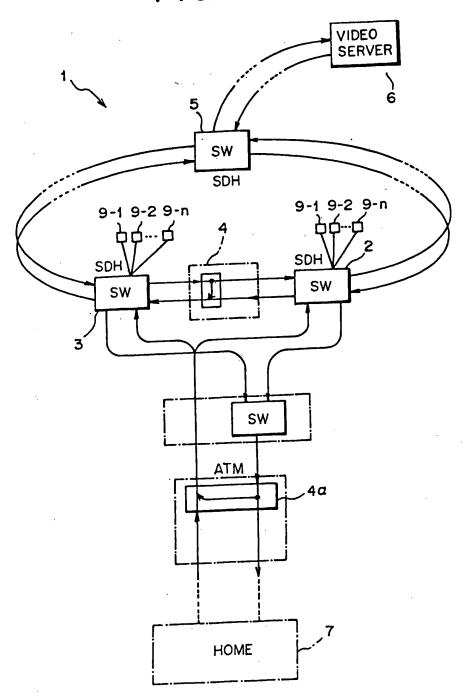
FIG. 1



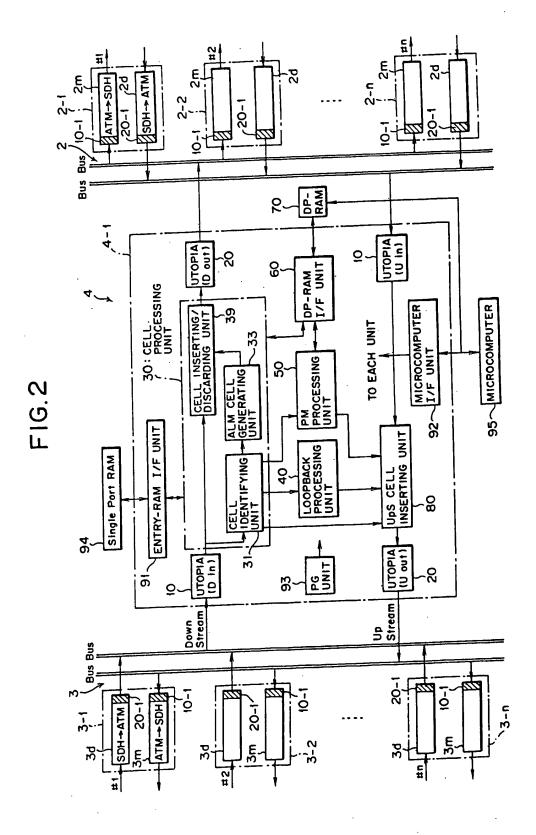


FIG. 3(a)

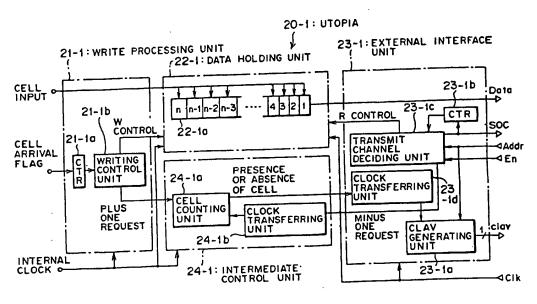


FIG. 3(b)

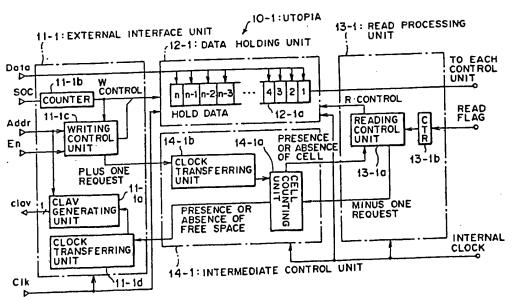


FIG. 4(a)

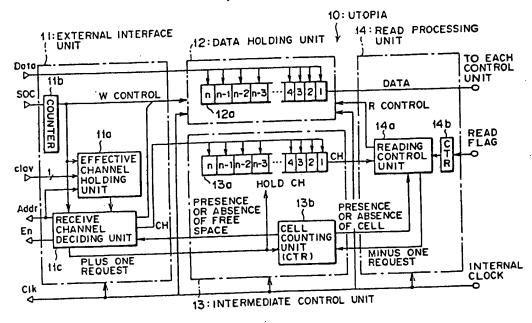
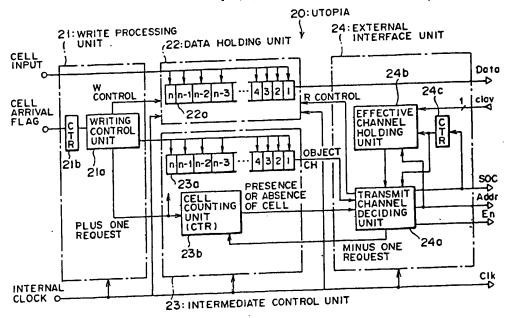
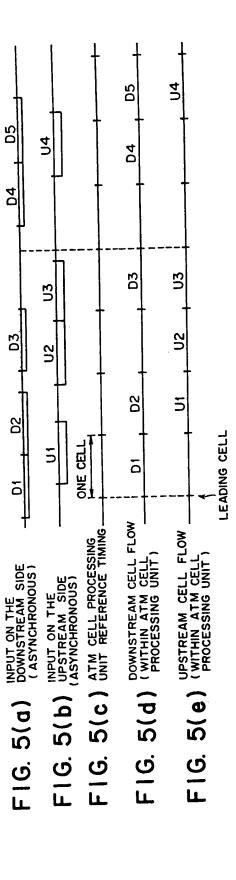


FIG. 4(b)





F16.6

TO: DP-RAM It keyle	32 Kbyte																									
STS-3c#4 VC-AIS/RDI NOTIFICATION STS-3c#4 VC-AIS/RDI NOTIFICATION STS-3c#4 VP-AIS/RDI NOTIFICATION STS-3c#2 VP-AIS/RDI NOTIFICATION STS-3c#4 VP/VC PM SETTING-NOTIFICATION STS-3c#4 VP/VC PM SETTING-NOTIFICATION STS-3c#4 VP/VC PM SETTING-NOTIFICATION STS-3c#4 VP/VC PM SETTING-NOTIFICATION STS-3c#4 ATM LAYER HEADER ERRORS NOTIFICATION STS-3c#4 VP/VC PM Act/Doct REQUEST-NOTIFICATION STS-3c#1 VP/VC PM Act/Doct REQUEST-NOTIFICATION STS-3		4 Kbyte	•			4 Kbyte	•			4 Kbvte				4 Kbyte		اح		8 Kbyte		ملحب		8 Kbvte				
	t Kbyte	₹ Kbyte	— Kbyte	1 Kbyte	Kbyte	Kbyte	1 Kbyte	1 Kbyte	- Kbyte	1 Kbyte	1 Kbyte	1 Kbyte	Kbyte	1 Kbyte	1 Kbyte	1 Kbyte	2 Kbyte	2 Kbyte	2 Kbyte	2 Kbyte	2 Kbyte	2 Kbyte	2Kbyte	2Kbyte	-	
500 500 500 £		STS-3c#3 VC-AIS/RDI NOTIFICATION	STS-3c#2 VC-AIS/RDI NOTIFICATION		7000 STS-3c#4 VP-AIS/RDI NOTIFICATION	STS-3c#3 VP-AIS/RDI NOTIFICATION	STS-3c#2 VP-AIS/RDI NOTIFICATION		6000 STS-3c#4 VP/ VC PM SETTING-NOTIFICATION	STS-3c#3 VP/VC PM SETTING-NOTIFICATION	STS-3c#2 VP/VC PM SETTING-NOTIFICATION		5000 STS-3c#4 ATM LAYER HEADER ERRORS NOTIFICATION	STS-3c#3 ATM LAYER HEADER ERRORS NOTIFICATION	STS-3c#2 ATM LAYER HEADER ERRORS NOTIFICATION		4000 STS-3c#4 VP/VC PM Act/Dact REQUEST-NOTIFICATION		3000 STS-3c#2 VP/VC PM Act/Dact REQUEST-NOTIFICATION		2000 STS-3c#4 VP/VC PM COUNT NOTIFICATION	STS-3c#3 VP/VC PM COUNT NOTIFICATION	1000		8	

FIG.7

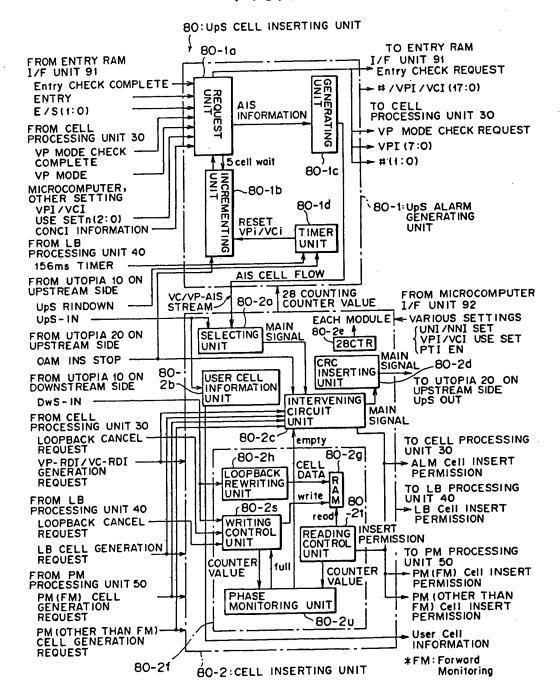


FIG.8

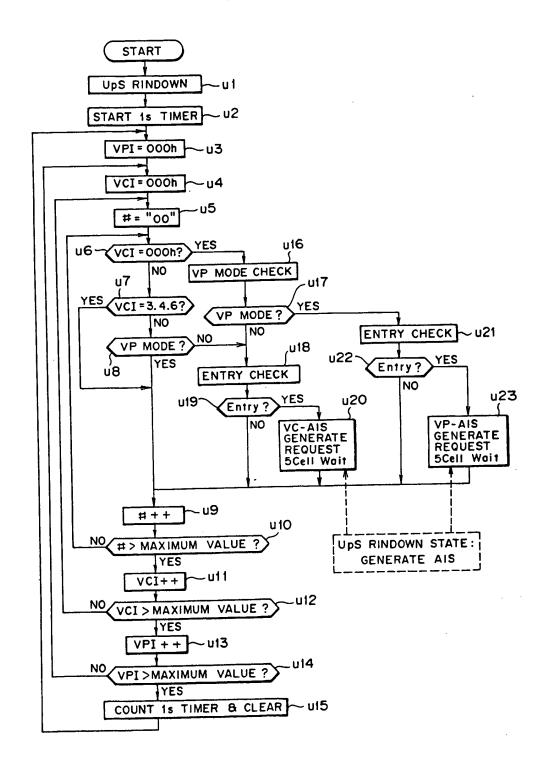
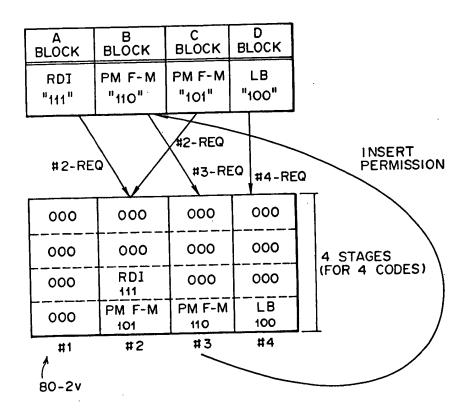


FIG.9



111 A BLOCK: CELL PROCESSING UNIT

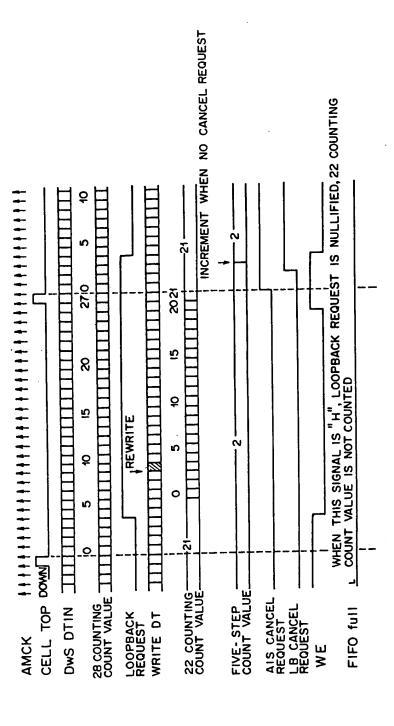
110 B BLOCK: PM PROCESSING UNIT (FM)

101 C BLOCK: PM PROCESSING UNIT (OTHER THAN FM)

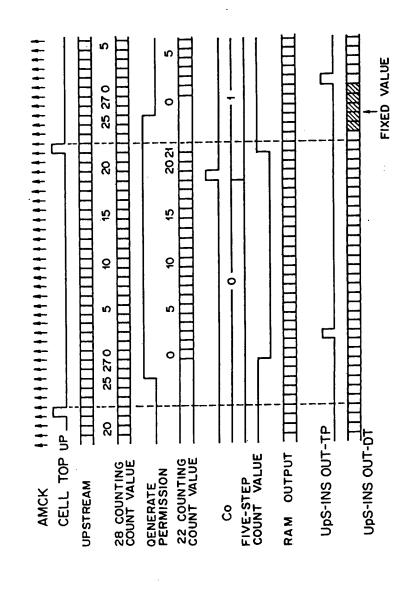
100 D BLOCK: LB PROCESSING UNIT

					(bit)			
(clk)	15 14 13 12	11 10 9 8	7,6,5,4	3210		12 11 10 9 8	<u> </u>	
1	GFC	VP	1	VCI	GFC	VI	PI 	VCI
2		VCI		PTI CLP		VCI		PTI CLP
3	UDF1 (UDF	2	L	1 (HEC)	UD	
4	OAM CELL	FUNCTION TYPE	DEFECT	TYPE	OAM CE	L FUNCTION TYPE	LOOPBA	
5					C	DRRELATIO	N TAG	
6						(4 byte)		
7								
8	DE	FECT LO	CATION					
9	(,	16 by1e)	•					
10					LOOF	BACK LOCA	TION ID	OPTIONAL)
11						(16 by1		
12								
13								
14								
15					 			
16								
17								
18		UNUSED			sou	RCE ID (O	PTIONAL)
19		(20 byte)			(16 byte)		
20		"6A"						
21								
22								
23								
24		UNUSE				UNUS		
25		(8 byte	<i>'</i> 			(8 by		
26		" 6A"				"6 A		
27	RESERVED	000000"	RE-ATTAC	C- 10 1(00)	RESERV	'ED 000000"		OI (,OQ,)
28		DUMMY B	41 41			DUMMY BI	T "L"	

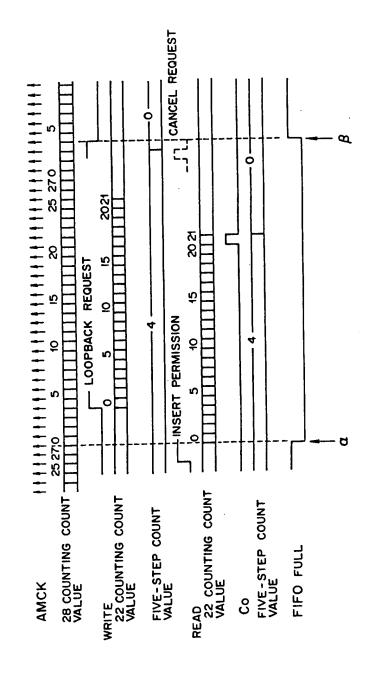
23~ 28:RDI & LB CELL FORMAT COMMON FIXED PATTERN



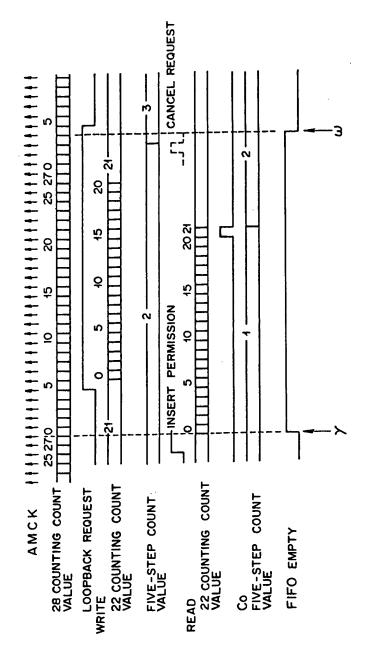
F16. 13

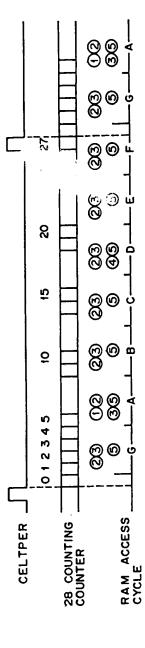


F1G. 14



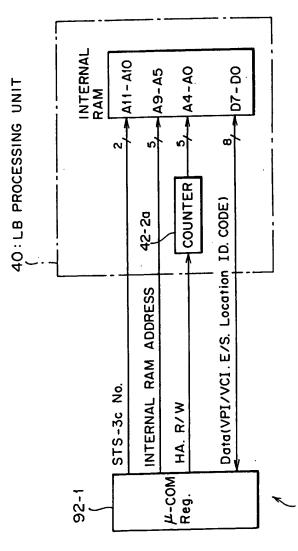
F1G. 15





F16 16

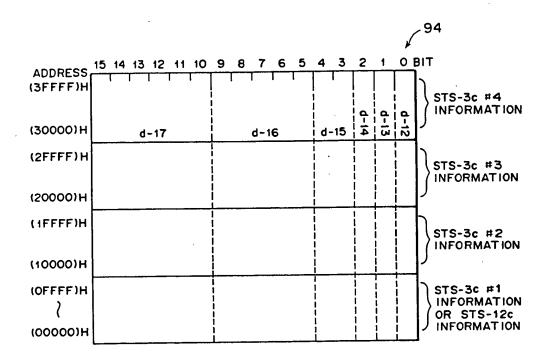
F16.17



92: MICROCOMPUTER I/F UNIT

F1G. 18

REG. STATE	READ/WRITE	READ/WRITE	READ/WRITE		READ/WRITE								READ/WRITE							 -		READ ONLY
, 01 , 00	ADDRESS		B8	80		B120	8112	<u>ا ا ا ا</u>		888	B80	B72	B64	B56	B48	B40	B32	B24	816	98	80	CODE
BIT D5 04 D3 . D2	O INTERNAL RAM		12V/1dV		E/S		 	1			 	 	LOCATION ID	(16 byte)		 		 				
07 06	15	+-	815	87		8127	8119	B111	B103	895	887	B79	871	863	B55	B47	B39	831	823	815	87	
L S I	╃—	·I	14H	15H	19н	17H	18н	н61	IAH	18н	1CH	10H	EH	1FH	20н	21H	22H	23H	24H	25H	26н	27H



d-12: ENTRY: WHETHER VPI/VCI IS ENTERED ("H": IN PROCESS OF ENTRY)

d-f3: VC TERMINATION: WHETHER VPI/VCI IS TERMINATED. WHEN "H", VPI/VCI IS IN (End-to-End) SETTING.

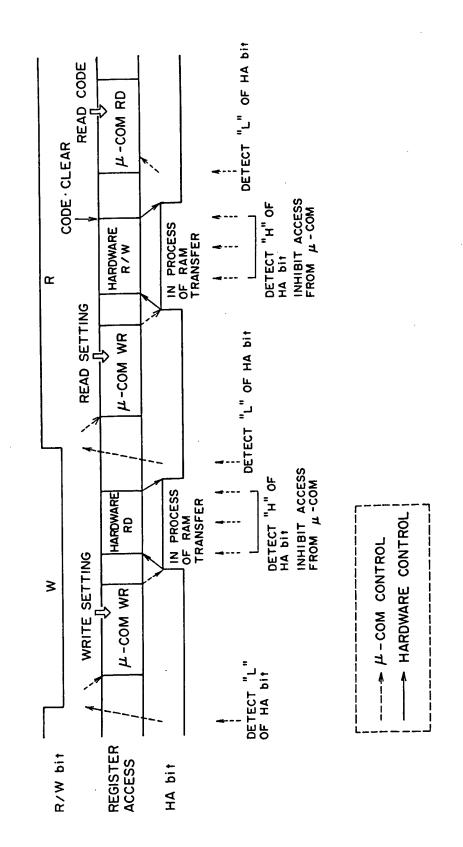
d-14: OAM INVALID:
WHEN "H", OAM CELL UNDERGOES NO PROCESS, PASSES THROUGH
WHEN DETECTED.

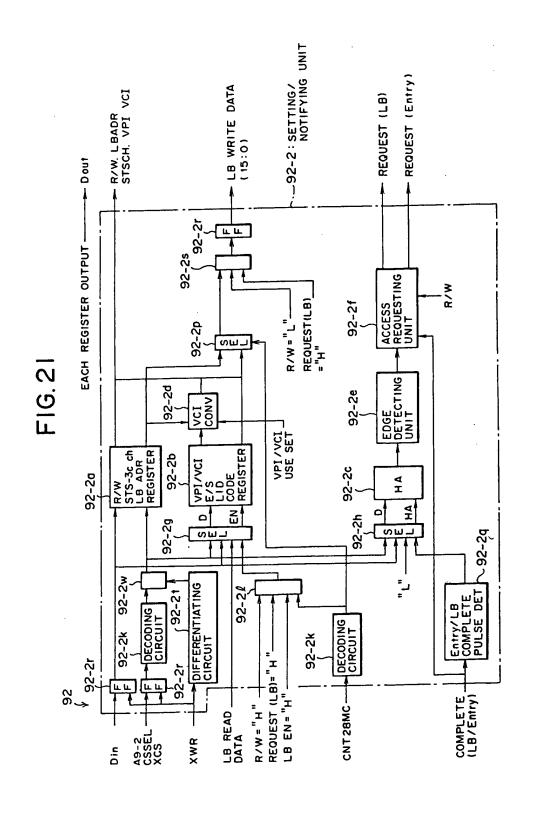
d-15: E-to-E/Segment:
DESIGNATE End-to-End/Segment OF VPI/VCI. 2bits EXPRESSES
4 STATES. ONLY TWO STATES OF "01" AND "11" ARE DETERMINED.
THE OTHER STATES ARE HANDLED AS INVALID (NO Segment DESIGNATION)

d-16: Loop Back ADDRESS:
SHOW WHICH ch AMONG 32ch THAT ARE OBJECTS OF Loop Back
VPI/VCI CORRESPONDS TO

d-17: VC ALM ADDRESS:
SHOW WHICH CHANNEL AMONG 64ch THAT ARE OBJECTS OF
VC-AIS/RDI DETECTION VPI/VCI CORRESPONDS TO

F16.20





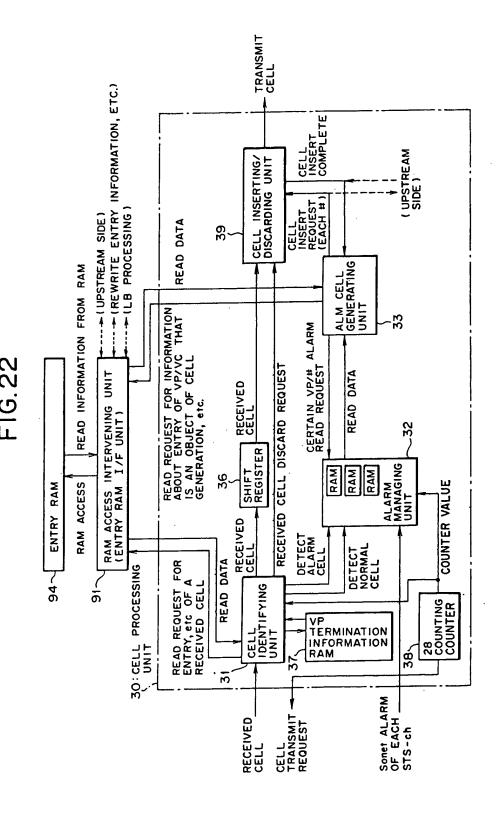
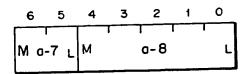


FIG. 23



a- 7: SHOW STS - 3c #

00: STS-3c #1 or STS-12C

01: STS-3c#2 10: STS-3c#3 11: STS-3c#4

q-8: VPI (HIGH ORDER 5 bits AMONG 8 bits)

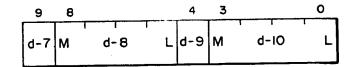
FIG. 24

7	6	5	4	3	2	1	0
d-12 h	d-12 g	d-12 f	d-12 e	d-12 d	d-12 c	d-12 b	d-12 a

"H": VP

"L": NORMAL

FIG. 25



d-7: SHOW VC-AIS STATE ("H": AIS)

d-8: CANCELING TIMER FOR VC-AIS 2.5 SECOND COUNTER, COUNTED UP

EVERY 156msec

d-9 : SHOW VC-RDJ STATE ("H": RDI)

d-10: CANCELING TIMER FOR VC-RDI,

2.5 SECOND COUNTER,

COUNTED UP EVERY 156msec

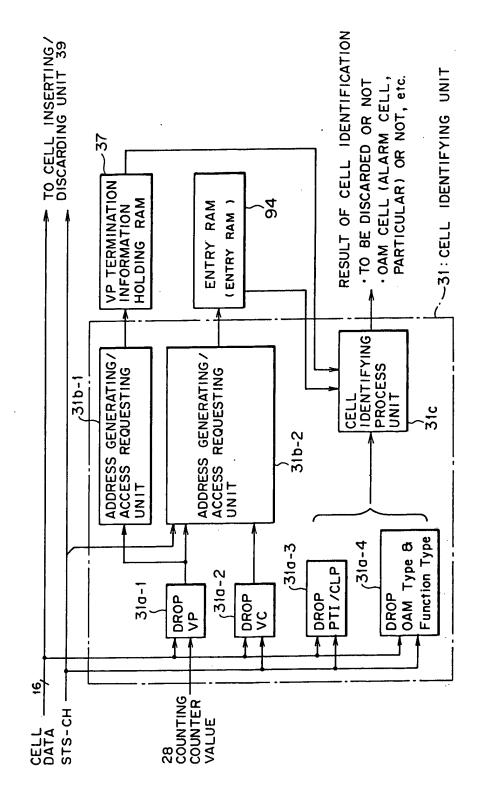


FIG. 27

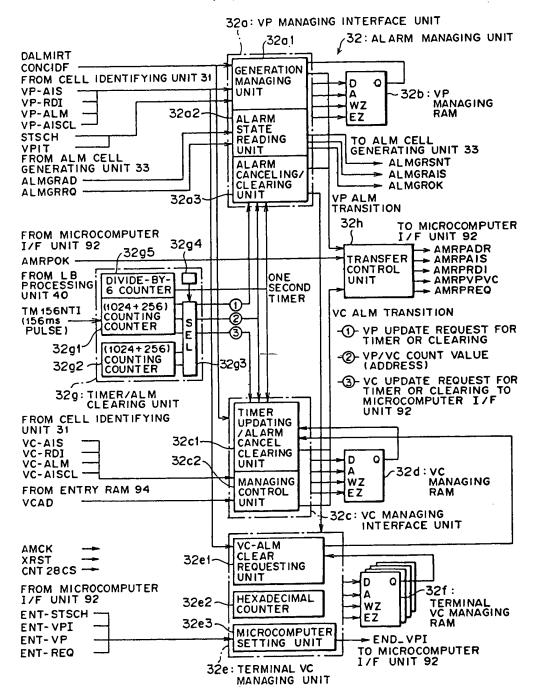
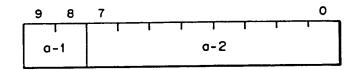


FIG.28



a-1: STS-3c IDENTIFICATION ADDRESS

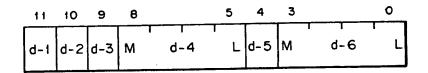
00: STS-3c #1 / STS-12c

01:STS-3c #2 10:STS-3c #3

11:STS-3c #4

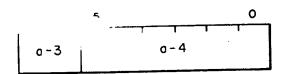
o-2: VPI (8 bits) OF ALM Cell WHEN VPI IS LESS THAN 8bits, ADD "O" TO HIGH ORDER bits

FIG.29



- d-1: SHOW VP-AIS STATE ("H": AIS)
- d-2: FLAG "500mf" SHOWING WHETHER ALARM CELL IS
 SENT WITHIN THE INITIAL 500msec AFTER GETTING
 INTO VP -AIS STATE OR SONET ALM STATE
 ("L":SEND COMPLETE)
 ("H":SEND NOT COMPLETE)
- d-3: FLAG "1sF" USED TO SEND ALARM CELL AT 1 sec INTERVALS
- d-4: VP-AIS CANCELING TIMER, 2.5 SECOND COUNTER, COUNTED UP EVERY 156 msec
- d-5 : SHOW VP-RDI STATE ("H":RDI)
- d-6: VP-RDI CANCELING TIMER, 2.5 SECOND COUNTER, COUNTED UP EVERY 156 msec

FIG. 30



a-3: STS-3c IDENTIFICATION ADDRESS

00: STS-3c #1 /STS-12c

O1: STS-3c#2 10: STS-3c#3 11: STS-3c#4

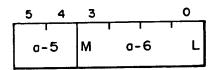
o-4: VC-AIS/RDI MANAGING INTERNAL ADDRESS (VC-ALM ADDRESS SET IN ENTRY RAM)

(0~63)

~32f ~32f #2. VP OF ch48~63 #3. VP OF ch48~63 #4. VP OF ch48~63 #1. VP OF ch48~63 #2. VP OF ch 16~31 #1. VP OF ch16~31 #3. VP OF ch 16~31 #4. VP OF ch 16~31 - RAM 2 -- RAM 4 CLEAR REQUEST TO VC ALARM STATE MANAGING RAM #2. VP OF ch32~47 #3. VP OF ch32~47 #4. VP OF ch32~47 # 1. VP OF ch00~15 #2. VP OF ch00~15 #3. VP OF ch00~15 #4. VP OF ch00~15 #1. VP OF ch32~47 - RAM 1 --RAM3 -32f~ 32f~ 32e1b 32e1: VC-ALM CLEAR REQUESTING UNIT COMPARING 32e1a 32e: TERMINAL VC (MANAGING UNIT HEXADECIMAL COUNTER VP OF RECEIVED
AIS CELL # OF RECEIVED_ VP-AIS CELL CLEAR COMPLETE 32e2

F1G 3

FIG.32



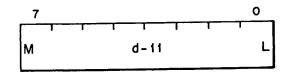
a-5: STS-3c IDENTIFICATION ADDRESS

00: STS-3c #1/STS-12c

01: STS-3c #2 10: STS-3c #3 11: STS-3c #4

a-6: LOW ORDER 4bits OF VC TERMINATION SETTING ch(6bits)

FIG. 33



d-11: HOLD VPI OF VPI/VCI TO WHICH VC TERMINATION IS SET

FIG.34

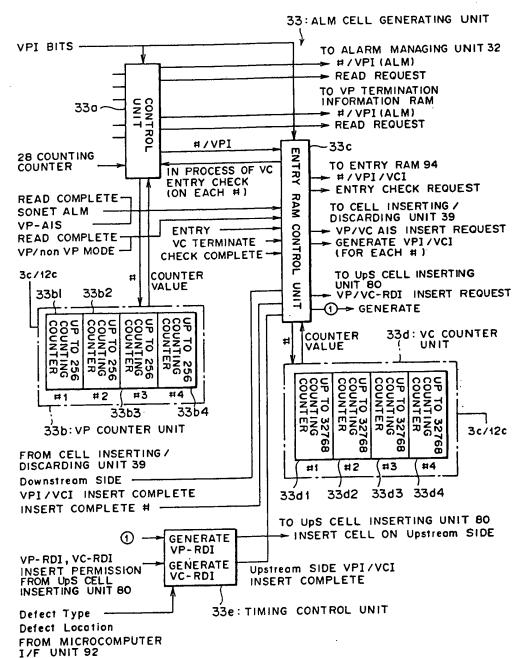


FIG. 35

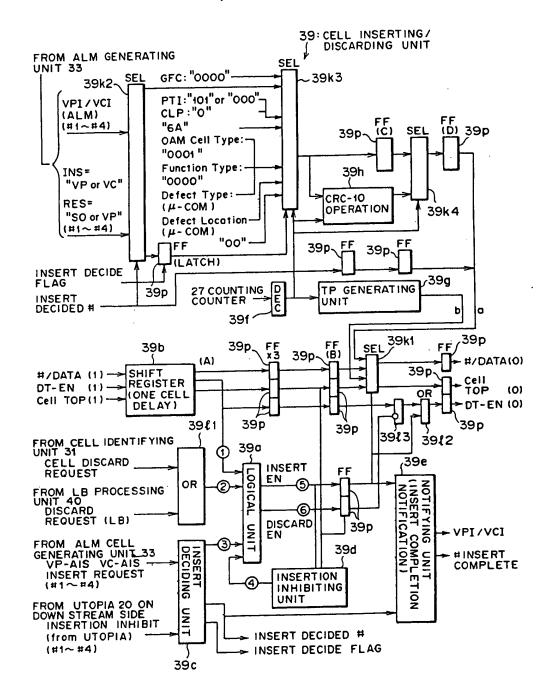


FIG.36

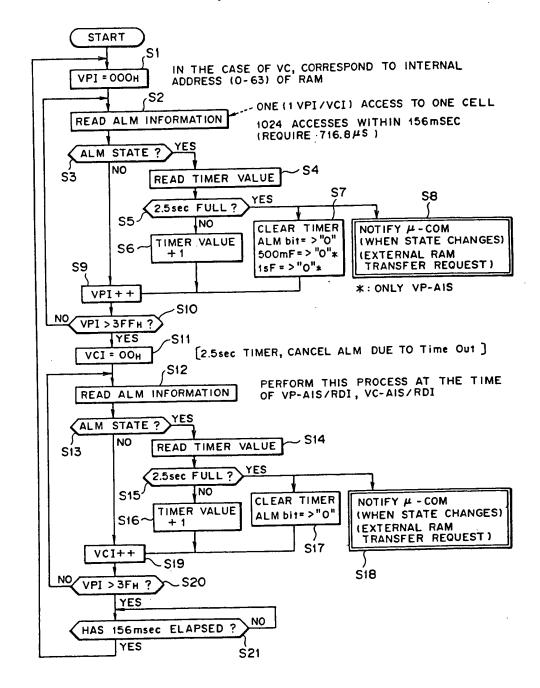


FIG. 37

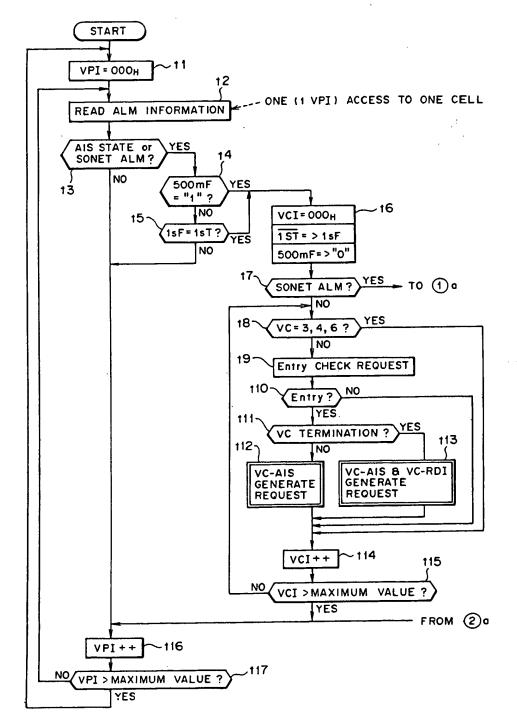
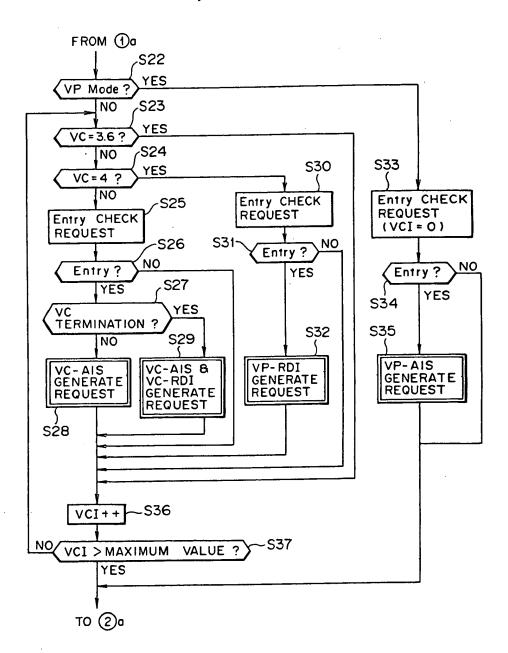
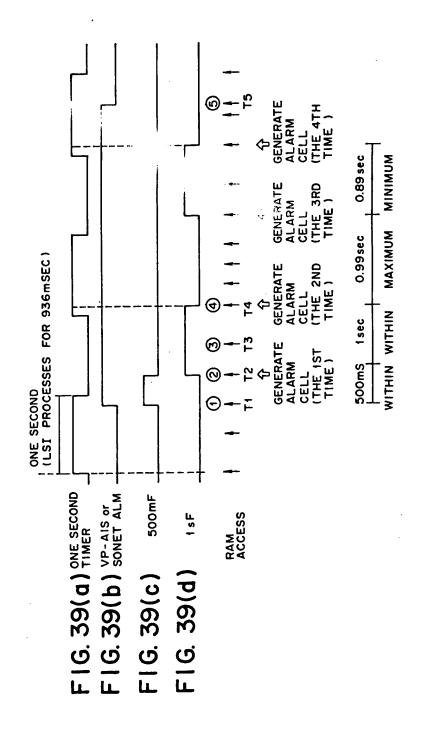


FIG. 38





TO MICROCOMPUTER I/F UNIT92 TRANSFER EN LBREOCH(1:0)
LBREOCH(1:0)
LBINSDT (15:0) RAM INSERT CELL TO UPS CELL INSERTING UNIT 80 744:0P-RAM ~45:TIMER **▼ SIDEN** 40: LOOP BACK PROCESSING UNIT % LB2 GENERATING UNIT PROCESS LBGEN 44-2 FROM MICROCOMPUTER I/F UNIT 92 VPIBIT 1 (2:0) VPIBIT 3 (2:0) VPIBIT 4 (2:0) VPIBIT 4 (2:0) LBTIMR SP-RAM Single Poot RAM 48: INITIALIZING UNIT 1111 TAGCTR(31:0)-FROM UTOPIA10 ON DOWNSTREAM SIDE CONCIRT CONCIDE LB11 LBSET1 DP-RAM CTR28(4:0) -FROM UPS CELL INSERTING UNITBO INSERT PERMISSION Port B TO PG UNIT 93 LBINSOK PortA **→**LBINIT MICROCOMPUTER
I/F UNIT 92
TRANSFER
I TROPRMATION
SDDATA(15:0)
TREND 44-1 TO CELL PROCESSING UNIT 30, PM PROCESSING UNIT 50, Ups CELL INSERTING UNIT 80 TMISEMTI VARIOUS TIMERS
TAGCTR(31:0)
CHI28CTR(6:0) LBINT 十LBCHKOK-十LBCHKNG-XRST .47: COUNTER UNIT 42 œ œ TIMACSEN -RECEIVE CONFIRMATION PROCESSING UNIT LBCHECK LB. T. M. E. œ FROM MICROCOMPUTER 1/F UNIT 92 TRANSFER INFORMATION TRREGUE LB-RW
TRADD(6:0) CHI 28CTR(6:0)-FROM CELL PROCESSING UNIT 30 LBADR(4:0) -VPI VCI (15:0) -CTR28(4:0) - DATA(15:0) - STSCH (1:0) - SIDNG - LBCHKON - LBCHKON - LBCHKSCP L TIMACSEN LBRETRY 156ms & Tog CTR TAG 156M TO CELL PROCESSING UNIT 30 LB RECEIVING PROCESS RESULT TO UDS CELL INSERTING UNIT BO INSERT CELL INFORMATION TO MICROCOMPUTER I/F UNIT 92 RECEIVED EN - CTR28(4:0) THE FIFOCL CTR28(4:0)
CTATA CTR28(4:0) DATA(15:0) **→** LBFIFOCL - L BDWOK PROCESS 4 FROM CELL PROCESSING UNIT SO CELL ENTRY INFORMATION VEND VCEND VCEND VC-SEG-LB VC-SEG-LB FROM MICROCOMPUTER I/F UNIT 92 LIDMUX(15:0) CELTPLB
DATADS(15:0)
DTENDS
STSCHDS(1:0) FROM UTOPIA 10 ON DOWNSTREAM SIDE AMCK → XLGRST → RECEIVED CELL DATA

FIG.41

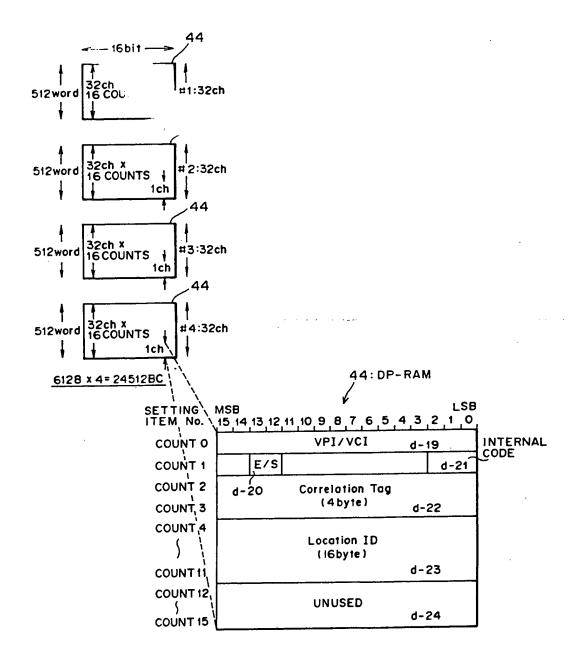


FIG.42

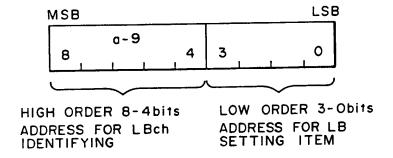
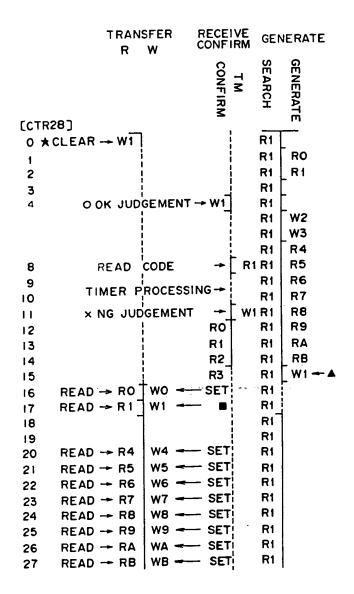


FIG. 43



★: CLEAR code AFTER OK/NG CODE IS READ

O: WRITE OK code RESULTING FROM OK JUDGEMENT

X: WRITE NG code RESULTING FROM TIME OUT

■: WRITE transmit wait code AT THE TIME OF MICROCOMPUTER SETTING AND CLEAR TIMER

A: WRITE receive wait code WHEN LB CELL IS GENERATED

FIG. 44

 15		
GFC	· · · · · · · · · · · · · · · · · · ·	VCI
	VCI PTI	CLF
	UNUSED (HEC)	
OAM CELL TYPE FL	INCTION TYPE LOOPBACK-INDICATION	
	CORRELATION TAG	
	(4 byte)	
LC	OOPBACK LOCATION ID (OPTIONAL)	
	(16 byte)	
	SOURCE ID (OPTIONAL) (16.byte)	.
	UNUSED	
	(8 byte)	
RESERVED	EDC (CRC-10)	
RESERVED	DUMMY BIT "L"	

FIG.45

FIG. 46

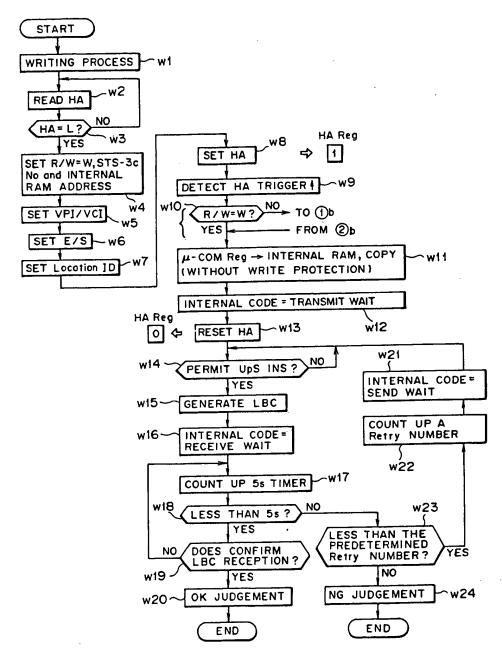


FIG.47

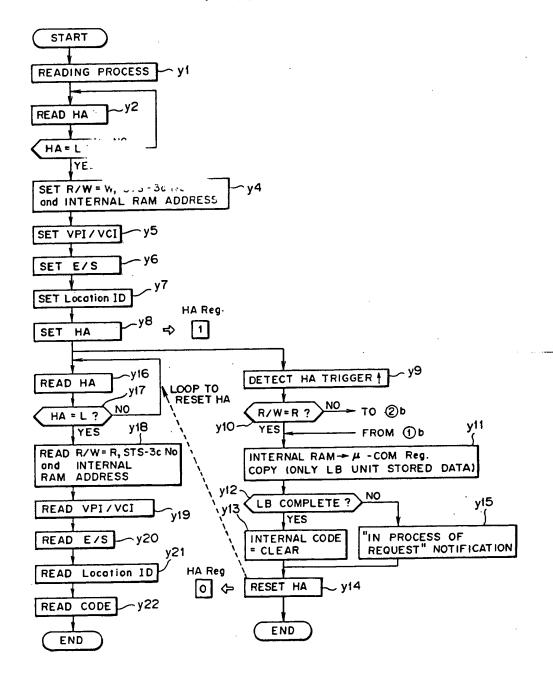


FIG. 48

